

## CLIMATOLOGICAL DATA FOR MARCH, 1912.

## DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

## GENERAL SUMMARY.

March, 1912, was cool and rainy. There had been a long dry spell and there was much anxiety lest the month should be like its predecessor. On March 4 rain fell generally throughout the State, and this first rain was followed by others, coming so opportunely that the widespread feeling of apprehension gave way to general rejoicing and confidence. The month as a whole was most favorable for agriculture. There were few injurious frosts, and while some slight damage was done to blossoming almonds the great bulk of the fruit crop escaped injury. It was a cool month, the temperature averaging  $3^{\circ}$  below the normal and  $4^{\circ}$  below March, 1911. With one exception, 1909, which was only slightly cooler, this was the coldest March in a period of 15 years. There were no warm periods and yet there were fewer frosts than usual.

The depth and extent of the snow cover is a matter of the greatest importance in California. At the beginning of March, 1912, there was less snow on the ground than for many years past. The season most resembling the present season in the matter of deficient snowfall was 1910, when there was an average depth of 5 feet. This year the average depth was 2 feet, in marked contrast with the beginning of March, 1911, when there was over 20 feet. By the end of March there had been a material increase in the depth and area of the snow cover and the prospects for an adequate water supply during the summer months were much improved.

The first good rain of the season, beginning March 4, lasted practically 5 days in the northern part of the State and 7 days in the southern portion. One peculiarity of the month's rainfall was the unequal distribution of the rain, both in intensity and frequency, the rains being especially heavy in the southern portion of the State. The second general rain began March 12, lasting about 48 hours, and was quickly followed by a third disturbance, lasting until March 16. There was a brief period of fair weather, during which strong north winds blew in the Sacramento Valley and on the northern coast. Beginning March 20, conditions favored the slow development of a depression of great depth over the valley of the Colorado and southern California. This resulted in occasional showers in the south and unsettled weather in the Great Basin. A portion of this disturbance moved southeastward to the Texas coast, thence recurring northward; but another portion appears to have remained over the Great Basin, slowly accumulating energy, until by March 26 it was a well-marked disturbance, with rains in the southern and central counties of California.

As illustrating this peculiar excess of rain in the south, which is of course an abnormal condition, it may be stated that rain fell at San Diego on 21 days during

March, breaking all records of frequency of rainy days for any month since records began, July 1, 1849.

The winds were mostly from the south. The sunshine was below the normal, and there was considerable cloudiness. There was less fog than usual, except along the central coast.

## TEMPERATURE.

The mean temperature for the State was  $3.2^{\circ}$  below the normal. The following table gives the means and departures for each March from 1897 to 1912, inclusive:

Year.	Mean.	Depart- ture.	Year.	Mean.	Depart- ture.
	$^{\circ}F.$	$^{\circ}F.$		$^{\circ}F.$	$^{\circ}F.$
1897.....	48.0	-3.6	1905.....	54.7	+2.9
1898.....	48.8	-3.0	1906.....	50.8	-1.0
1899.....	51.2	-0.6	1907.....	49.0	-2.8
1900.....	55.7	+3.9	1908.....	51.8	0.0
1901.....	53.0	+1.2	1909.....	48.5	-3.3
1902.....	49.7	-2.1	1910.....	54.7	+2.9
1903.....	50.9	-0.9	1911.....	52.7	+0.9
1904.....	51.1	-0.7	1912.....	48.6	-3.2

The highest temperature recorded was  $92^{\circ}$  at Lemon Cove on the 5th. This was  $8^{\circ}$  lower than the highest temperature recorded during March, 1911. The lowest temperature was  $-17^{\circ}$  at Tamarack on the 14th. This was  $17^{\circ}$  lower than the lowest temperature during March, 1911, at the same place. The highest mean temperature was  $63.6^{\circ}$  at Needles, although a mean of  $66.4^{\circ}$  is given for Soledad, but this is not based on maximum and minimum readings. The lowest mean temperature was  $19.4^{\circ}$  at Tamarack.

## PRECIPITATION.

The precipitation was about 10 per cent greater than the normal. It was less than that of March, 1911, but greater than in March, 1910, 1909, and 1908. The rain was unusually heavy in the southern counties, breaking records in the extreme south.

The following table gives the average and departure from the normal for each March, from 1897 to 1912, inclusive:

Year.	Mean.	Depart- ture.	Year.	Mean.	Depart- ture.
	Inches.	Inches.		Inches.	Inches.
1897.....	3.98	-0.76	1905.....	5.42	+0.68
1898.....	0.66	-4.08	1906.....	9.19	+4.45
1899.....	6.10	+1.36	1907.....	10.67	+5.93
1900.....	2.38	-2.36	1908.....	1.49	-3.25
1901.....	1.01	-3.73	1909.....	3.56	-1.18
1902.....	3.39	-1.35	1910.....	2.43	-2.31
1903.....	5.80	+1.06	1911.....	6.02	+1.28
1904.....	8.52	+3.78	1912.....	5.17	+0.43

The greatest monthly rainfall was 21.35 inches at Nellie, and none occurred at Bagdad. The greatest 24-hour rainfall was 5.84 inches at Newhall. Other heavy rainfalls were 5.20 inches at Stirling, 3.41 inches at Magalia, 3.64 inches at Mono Ranch, 3.80 inches at Kennett; and 3.22 inches at Cuyamaca.

**Snowfall.**—March, 1912, was a month of moderately heavy snowfall in the mountains. The prospects for water were very poor at the beginning of the month, but were much improved at the close. The run-off was light and the streams were unusually low. This condition was in marked contrast with March, 1911, when the snow cover was unusually deep and all the streams were running bank full.

**Summit.**—The following table shows the depth of snow on the ground at Summit on given dates in March during the period 1907 to 1912:

	Mar. 1.	Mar. 15.	Mar. 31.
	Inches.	Inches.	Inches.
1907.....	104	191	262
1908.....	116	130	60
1909.....	201	196	191
1910.....	65	38	88
1911.....	222	276	138
1912.....	26	81	53

#### SUNSHINE.

The following table gives the hours of sunshine and percentages of the possible:

Station.	Hours.	Percent- age of possible.	Station.	Hours.	Percent- age of possible.
Eureka.....	179	48	Sacramento.....	194	52
Fresno.....	219	59	San Diego.....	178	48
Los Angeles.....	204	55	San Francisco.....	158	43
Mount Tamalpais.....	172	46	San Jose.....	196	53
Red Bluff.....	225	61	San Luis Obispo.....	134	36

#### NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS DURING MARCH, 1912.

By N. R. TAYLOR, Local Forecaster.

**Sacramento watershed.**—All streams in this watershed averaged lower than for any corresponding month of which there is a record, except that the Sacramento River at Red Bluff was lower in March, 1898.

For the fourth consecutive month, which covers a period during which high stages are almost invariably maintained, with occasional floods and freshets, the rivers have remained unprecedentedly low, the average at many points on the Sacramento and other streams since December 1, 1911, showing but little departure from that of the summer months.

There were substantial rises in the Sacramento River from Redding to the mouth of the Feather River between the 7th and 15th, and a slight swell at points below Vernon between the 15th and 20th. There was practically no rain after the middle of the month, and by the 15th the river was falling at all points above Colusa, and by the 21st a general fall was in progress.

The rivers of the Feather-Yuba territory responded slightly to the rainfall, but there were no rises much in excess of 2 feet at any point along these streams, all of which averaged from 2 to 3 feet below the March normal stages and much below the lowest averages previously recorded in March.

The American River averaged 1.3 feet below the previous lowest average for the month. It rose slowly during the first few days of the month and culminated in a stage of 6.3 feet on the 7th. After this date it fell steadily.

The occurrence of snowfall in the mountains was practically coincident with the rains in the valleys, and at some points over a foot of snow fell as low as the 2,000-foot level. The effect of melting snow on stream flow was barely appreciable at any time during the month.

The water supply now in sight in the Sacramento watershed is probably the most limited that has ever before been known at this season of the year, and there is every indication that record breaking low-water stages will be reached during the coming summer and fall in all streams and that there will be an unusual scarcity of water for agricultural and mining purposes.

**Lower San Joaquin watershed.**—The rainfall of the San Joaquin drainage basin, like that of the Sacramento, was mostly confined to the first half of the month. It was, however, more copious, and along many of the streams the normal for the month was exceeded. This was notably so in the upper reaches of the San Joaquin and in the headwaters of the Mokelumne, Tuolumne, and Stanislaus. In the lower Mokelumne and in the Calaveras and the San Joaquin below Lathrop the rainfall was deficient. While all streams in this watershed showed the effects of the rainfall there was in no case a rise greater than 2 feet. From the 18th to the end of the month the rivers fell steadily, and the average for all streams is the lowest on record for the month.

There will probably be a marked shortage of water at all points in this watershed during the late summer and fall and an absence of the usual June freshets.

#### NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. BONNETT, Local Forecaster.

As might be expected in the driest of recent years, the streams in the upper San Joaquin watershed were lower than they have been for many years. Notwithstanding precipitation during the month was considerably in excess of the normal for March, there was very little run-off and but little change in the streams.

In the Kaweah, the range from lowest to highest water was only 0.3 foot; in the Kings, 0.5; in the San Joaquin at Friant, 1.5 feet; and at Firebaugh, 1.2. At Merced Falls on the Merced there was a range of 1.8 feet. The highest water in the upper San Joaquin occurred at Friant on the 7th and at Firebaugh on the 9th. The highest stages in the Merced and Kings occurred a few days later than this, while the Kaweah apparently was not affected by the several storms of the month as its stage remained remarkably uniform throughout. All streams in the district except the Kaweah fell during the latter half of the month.

#### WEATHER CONDITIONS AT LOS ANGELES, CAL.

By A. B. WOLLABER, Local Forecaster.

The drought which prevailed in southern California during the closing months of 1911 and January and February, 1912, and which was the most severe of any on record since the establishment of this station, was effectually broken by the copious rains which fell over this section from March 1 to 13, inclusive, and which resulted in over 6 inches of rain in Los Angeles, and correspondingly generous amounts in the outlying districts south of the Tehachapi.

TABLE 1.—Climatological data for March, 1912. "District No. 11, California."

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<b>Oregon.</b>																				
Klamath Agency.	Klamath.	4,169	4	36.2	-	65	29	22	19†	37	0.90	-0.39	0.40	9.0	3	13	12	6	n.	Edson C. Watson.
Klamath Falls.	do.	4,100	23	35.5	-4.1	69	31	13	3	41	1.05	-0.36	0.45	4.0	3	8	13	10	n.w.	W. H. Heileman.
Lakeview.	Lake.	4,825	29	35.5	-	64°	27	10°	3	44°	1.17	-0.67	0.30	9.2	6	20c	2c	6°	n.	Ralph E. Koozer.
Merrill.	Klamath.	4,070	6	35.5°	-	65	31	7	3	49	1.02	-0.30	0.30	5.5	10	5	14	12	w.	Mrs. Agnes Ritchison.
Yonna.	do.	4,148	5	34.5	-	65	31	7	3	49	1.02	-0.30	0.30	5.5	10	5	14	12	w.	Jacob Ruecke.
<b>California.</b>																				
Alameda.	Alameda.	2	35.4	-	66	31	-4	3	49	1.53	-0.43	20.0	14	10	12	9	n.	Chas. E. Sears.		
Alturas.	Modoc.	4,460	8	35.4	-	66	31	28	2†	44	2.44	+1.02	0.99	0	7	11	0	20	w.	Prof. C. B. Towle.
Angola.	Tulare.	208	12	48.7	-4.9	79	6	28	2†	44	1.94	-0.36	0.65	6	18	0	1	13	n.	Santa Fe Co.
Antioch **.	Contra Costa.	46	33	51.0	-3.4	70	3	32	7	41	1.05	-0.67	1.43	0	10	11	1	19	n.	Southern Pacific Co.
Antos **.	Santa Cruz.	102	27	51.9	-0.4	68	18†	34	16	3.78	-0.67	1.05	0	26	4	2	25	n.	Do.	
Arrowhead Springs.	San Bernardino.	2,000	3	49.4	-	66	18	34	14	22	7.69	-2.81	0.73	0	9	21	1	19	n.	Dr. E. A. Crokat.
Auburn.	Placer.	1,360	41	47.0	-4.7	68	2	32	26	30	2.91	-0.21	2.40	0	13	20	1	7	w.	Southern Pacific Co.
Avalon.	Los Angeles.	30	2	54.8	-	65	6†	45	17†	20	8.24	-3.57	1.85	0	14	14	4	13	w.	T. S. Manning.
Azusa.	do.	540	10	54.0	-2.3	78	6	34	14	36	7.85	-3.00	0.00	0	0	0	0	0	w.	A. P. Griffith.
Bagdad.	San Bernardino.	784	9	61.8	-	79	20	45	13	26	0.00	-	-	-	-	-	-	-	w.	Santa Fe Co.
Bakersfield.	Kern.	404	23	57.6	+0.9	76	2	44	22	26	2.19	+1.20	0.70	0	13	19	0	12	w.	Do.
Barstow.	San Bernardino.	2,105	9	54.6	-	80	24	33	2	41	1.22	+0.66	0.75	0	5	19	0	12	w.	E. L. White.
Berkeley.	Alameda.	317	25	50.8	-1.0	66	30	39	16	20	2.96	-1.94	1.20	0	6	10	8	13	sw.	State University.
Biggs **.	Butte.	98	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	sw.	Southern Pacific Co.
Bishop.	Inyo.	4,450	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	sw.	Paul E. Lodge.
Bishop Creek.	do.	8,500	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	sw.	Do.
Blocksbury.	Humboldt.	1,700	6	46.2	-	74	31	24	3	41	8.86	-	1.70	3.0	11	6	12	13	se.	Victor Hope.
Blue Canyon.	Placer.	4,625	13	37.2	-2.6	60	23	20	14†	31	8.00	-6.40	1.65	40.8	12	13	3	15	n.	Southern Pacific Co.
Blythe.	Riverside.	268	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.	D. H. Carey.
Branscomb.	Mendocino.	2,000	12	43.3	-	68	31	24	3	35	8.90	-3.84	2.85	2.5	11	12	8	11	n.	A. J. Haun.
Brawley.	Imperial.	-105	3	58.1	-	80	19†	35	20	38	0.75	-0.75	0.75	2.0	10	7	11	13	sw.	M. D. Witter.
Burney.	Shasta.	3,300	2	39.0	-	70	26	16	3	51	2.77	-	1.75	2.0	7	11	7	13	sw.	Mrs. M. D. Chambers.
Cahuilla.	Riverside.	3,600	1	42.0	-	64	24	31	10	39	3.16	-	1.55	3.0	6	7	12	9	sw.	Carl Stevens.
Calexico.	Imperial.	0	7	61.1	-	82	19	43	12†	33	0.56	-	0.53	0	2	20	1	10	nw.	J. E. Peck.
Caliente **.	Kern.	1,290	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n.	Southern Pacific Co.
Calistoga **.	Napa.	363	40	50.4	-3.1	70	26	22	3	31	6.31	+0.63	2.10	0	9	12	0	19	w.	Do.
Campbell.	Santa Clara.	217	15	49.8	-1.8	70	31	32	22†	35	3.59	-0.00	1.84	0	7	9	9	13	s.	F. M. Righter.
Camptonville (near).	Yuba.	3,500	5	45.0	-	74	31	28	14	38	8.35	-	2.60	16.0	14	11	6	14	n.	Cal. Gas & Elect. Co.
Cedarville.	Modoc.	4,675	18	36.4	-1.8	63	23†	11	3	38	1.64	-0.31	0.60	18.0	11	12	19	0	sw.	T. H. Johnstone.
Chico.	Butte.	189	42	50.8	-4.4	76	31	25	3	40	3.70	+0.45	1.25	0	9	12	5	14	s.	G. H. Stephenson.
China Flat.	Humboldt.	600	3	50.2	-	79	31	25	3	46	5.85	-	1.29	0	11	13	8	10	w.	O. I. Westerburg.
Chino **.	San Bernardino.	714	20	52.4	-2.9	68	1†	39	15†	36	6.20	+2.46	1.73	0	11	1	0	30	se.	Southern Pacific Co.
Cisco **.	Placer.	5,939	41	36.4	+3.0	57	24†	18	9	36	6.80	-2.18	2.40	68.0	14	15	2	14	se.	Do.
Claremont.	Los Angeles.	1,200	20	51.3	-2.6	74	18	35	13†	32	7.51	+3.23	1.74	0	17	10	5	14	se.	Prof. F. P. Brackett.
Cloverdale.	Sonoma.	340	10	47.8	-4.7	79	31	33	16	37	5.58	-3.91	1.82	0	10	20	5	6	s.	John O. Ogle.
Coalinga.	Fresno.	52	2	52.2	-	78	1	34	2	31	3.17	-	0.90	0	8	14	9	8	w.	Union Oil Co.
Colfax.	Placer.	2,421	41	43.0	-6.1	66	1	28	3	29	4.07	-4.03	0.84	0	11	11	1	19	s.	Southern Pacific Co.
Colusa.	Colusa.	60	9	51.4	-	74	31	31	3	29	4.04	-0.37	0.87	0	5	17	7	11	n.	C. D. McComish.
Corning **.	Tehama.	276	27	54.1	+1.5	68	23	38	16	54.0	+2.09	2.53	0	7	10	11	10	s.	Southern Pacific Co.	
Cuyamaca.	San Diego.	4,677	13	37.1	-3.6	63	24	23	15	25	19.87	+11.90	3.22	23	18	5	6	20	w.	L. L. Macquarie.
Davilsville.	Yolo.	51	40	50.4	-5.8	78	31	30	3	38	2.65	+0.06	1.19	0	7	11	16	4	sw.	S. H. Beckett.
Deer Creek.	Nevada.	3,700	5	37.6	-	62	23	19	3	35	9.04	-	2.63	29.0	15	8	7	16	s.	Cal. Gas & Elect. Co.
Del Monte.	Monterey.	25	1	56.2	-	68	4	23	22	25	7.56	-	1.20	0	9	10	0	21	w.	H. R. Warner.
Delta.	Shasta.	1,138	27	51.0	+1.1	76	25†	24	17	43	10.02	-0.22	3.05	0.2	11	18	2	11	n.	Southern Pacific Co.
Denair.	Stanislaus.	126	12	48.6	-4.7	69	30	24	24	38	2.43	+0.13	1.00	0	7	9	0	22	s.	Santa Fe Co.
De Sabla.	Butte.	2,500	8	43.6	-	66	22†	26	9	36	11.33	-	2.45	12.0	12	8	11	12	s.	Cal. Gas & Elec. Co.
Dobbins (near).	Yuba.	1,650	8	50.9	-	72	31	34	9	32	5.85	-	1.92	0	12	12	8	11	s.	Do.
Downleville.	Sierra.	3,150	1	42.4	-	71	31	23	3	44	7.66	-	2.20	5.0	17	7	11	13	s.	J. T. Mason.
Dudley.	Kings.	595	27	54.2	-	76	1	37	13	34	3.76	-	1.04	0	14	9	8	14	w.	Union Oil Co.
Dudleys.	Mariposa.	3,000	3	41.4	-	63	18†	20	14	34	7.07	-	1.35	12.0	13	8	2	21	nw.	W. H. Dudley.
Dunlap (near).	Fresno.	2,800	44	42.2	-	67	1	28	13†	31	6.58	-	1.30	1.0	18	3	15	13	s.	U. S. Forest Service.
Dunnigan **.	Fresno.	65	35	57.0	+2.0	72	30†	44	11†	28	5.53	-0.43	0.97	0	7	15	6	10	n.	Southern Pacific Co.
Dunsmuir **.	Siskiyou.	2,285	23	42.9	-1.9	77	31	30	3†	34	8.86	-0.41	2.30	2.5	13	16	1	14	n.	Do.
Durham.	Butte.	160	17	51.2	-1.0	75	31	32	22†	43	4.34	+0.48	2.00	0	9	12	5	14	s.	R. W. Durham.
El Cajon.	San Diego.	482	13	53.9	-2.6	76	5†	38	3†	34	7.80	+5.09	1.75	0	21	10	12	9	w.	H. H. Kessler.
Electra.	Amador.	725	8	50.0	-	70	31	34	23	31	5.01	-	2.37	0	10	13	6	12	s.	Cal. Gas & Elec. Co.
Elsinore.	Riverside.	1,234	17	50.8	-4.8	74	24	31	14	39	6.73	+3.70	1.34	0	14	13	17	17	sw.	A. F. Schult.
Emigrant Gap.	Placer.	5,230	38	35.2	-2.5	51	31	22	2†	27	7.90	-0.74	1.90	51.0	11	6	10	15	s.	Southern Pacific Co.
Escondido.	San Diego.	657	18	53.2	-1.7	73	5	35	3	29	8.04	+0.52								

TABLE 1.—Climatological data for March, 1912. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.				
<i>California—Continued.</i>																			
Independence.	Inyo.	3,907	16	43.2	- 6.4	64	31	22	11	34	1.10	+ 0.62	0.50	T.	7	19	6	6	n.
Indio.	Riverside.	20	34	60.4	- 4.9	82	19	41	12†	34	1.66	+ 1.35	0.70	0	6	15	12	4	n.w.
Inskip.	Butte.	4,975	5	37.4	- 0.2	66	31	22	2†	30	11.10	-	2.78	57.0	8	8	8	15	.....
Ione **.	Amador.	287	34	54.1	+ 0.2	70	30†	32	9	...	2.47	- 1.47	0.63	0	8	10	0	21	n.w.
Jamestown.	Tuolumne.	1,471	9	47.0	-	70	2†	30	24†	36	5.06	-	1.30	0	12	10	0	21	sw.
Kennett.	Shasta.	730	50	52.0	-	77	31	31	9	37	10.32	-	3.80	0	14	17	6	8	sw.
Kentfield.	Marin.	65	24	51.4	-	75	31	32	8†	40	7.31	- 1.29	2.44	0	10	7	7	17	.....
King City.	Monterey.	333	25	55.8	+ 2.7	80	3	33	13†	36	3.03	+ 0.90	1.11	0	7	14	8	17	n.
Lake Eleanor.	Tuolumne.	4,700	2	35.4	-	58	23†	12	14	36	7.68	-	1.13	56.0	17	8	6	17	se.
La Porte.	Plumas.	5,000	18	34.7	- 0.5	58	31	15	9	31	10.18	- 5.68	2.54	61.2	14	7	15	9	s.
Le Grand.	Merced.	255	12	51.2	- 0.1	76	30	30	27	42	2.64	- 0.16	0.80	0	8	10	1	20	se.
Lemon Cove.	Tulare.	600	17	56.0	- 0.2	92	5	30	3	51	5.12	+ 1.71	1.12	0	12	9	6	16	w.
Lick Observatory.	Santa Clara.	4,209	23	37.3	- 3.7	53	28	26	16	16	3.96	- 1.71	1.34	T.	14	9	7	15	n.
Livermore.	Alameda.	485	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E. G. Still.
Lodi.	San Joaquin.	45	30	52.0	- 2.7	72	31	31	3	35	2.40	- 1.23	0.86	0	7	9	13	9	w.
Lone Pine.	Inyo.	2,728	7	48.4	-	72	1	24	13	44	1.43	-	0.59	1.4	6	13	9	9	n.
Long Valley.	Lassen.	4,400	3	39.6	-	64	28	15	3	36	1.49	-	0.66	3.0	9	5	10	16	sw.
Los Angeles.	Los Angeles.	293	35	54.2	- 1.4	68	18	43	13	21	6.99	+ 4.01	2.04	0	13	6	12	13	ne.
Los Banos **.	Merced.	121	25	55.3	- 0.1	70	29	44	22†	37	1.39	+ 0.04	0.68	0	7	3	0	23	s.
Los Gatos.	Santa Clara.	600	25	50.6	- 1.7	74	31	36	9	34	5.52	- 0.38	2.10	0	8	9	5	17	s.
McCloud.	Siskiyou.	3,410	2	41.2	-	67	27†	16	3†	41	6.07	-	1.89	26.0	11	15	10	6	s.
Macdoel.	do.	4,258	5	36.0	-	63	31	7	3	50	0.30	-	0.30	3.0	1	13	13	5	sw.
Madelaine.	Lassen.	5,270	3	32.8	-	62	31	3	3	49	2.42	-	0.30	24.5	12	11	2	18	sw.
Magalia.	Butte.	2,321	8	45.0	-	74	30	28	8	39	10.62	-	3.41	1.0	11	12	8	11	se.
Mammoth Tank.	Imperial.	257	34	59.0	- 7.1	80	3†	39	2†	40	3.45	+ 3.25	1.50	0	3	23	4	17	w.
Maricopa.	Kern.	640	1	53.6	-	74	5†	38	7†	29	3.28	-	1.20	0	11	12	8	11	Union Oil Co.
Marysville.	Yuba.	67	41	52.4	- 5.0	77	31	31	3	39	3.06	- 0.76	1.55	0	7	14	0	17	s.
Mecca.	Riverside.	-185	6	59.9	-	81	19	39	2†	33	1.35	-	0.95	0	3	15	15	1	n.w.
Menlo Park **.	San Mateo.	64	34	52.6	- 0.9	67	31	32	7	...	2.69	- 0.32	0.65	0	10	9	3	19	n.w.
Merced.	Merced.	173	38	52.1	- 2.9	68	31	34	9†	30	2.64	+ 0.87	0.84	0	8	11	6	11	w.
Middlewater.	Kern.	1	53.2	-	72	23†	38	15	31	2.76	-	0.95	0	7	11	6	11	n.w.	
Mill Creek No. 1.	Amador.	5	43.2	-	65	18	29	14†	32	8.45	-	2.68	1.5	16	8	6	7	17	Cal. Gas & Elec. Co.
Milton (near).	Calaveras.	660	21	51.6	- 2.1	68	31	37	16	25	4.15	- 0.17	1.68	1.5	16	8	9	12	J. H. Southwick.
Modesto **.	Stanislaus.	90	40	55.1	- 0.8	67	24†	38	11	...	1.77	+ 0.15	0	8	15	0	0	16	Do.
Mojave.	Kern.	2,751	35	36.5	- 17.0	54	31	20	5	15	5.00	+ 4.21	2.00	T.	4	25	1	5	.....
Mokelumne Hill.	Calaveras.	1,550	19	48.6	-	67	31	34	13†	24	5.03	- 1.21	2.34	0	7	6	6	18	C. E. Prindle.
Mono Ranch.	Ventura.	3,210	6	41.3	-	65	31	25	11†	38	13.16	-	3.64	6.5	12	7	12	n.w.	
Montague.	Siskiyou.	2,450	24	40.4	- 5.3	70	23†	15	3	47	1.37	+ 0.30	1.10	0	10	9	12	I. E. Debay.	
Monterey **.	Monterey.	15	47	53.0	- 0.9	64	18	42	1†	...	3.13	- 0.08	0.85	0	8	2	0	29	se.
Monterey.	Kern.	4,500	13	42.4	- 7.5	70	3	30	9	36	6.10	+ 1.96	1.53	0	12	7	6	18	John C. Knecht.
Mount Tamalpais.	Marin.	2,375	13	43.4	- 3.7	62	31	34	12	20	3.95	- 1.18	1.35	0	13	8	9	14	U. S. Weather Bureau.
Napa City.	Napa.	20	35	50.0	- 1.5	70	30	32	4†	35	4.04	+ 0.34	1.57	0	7	0	30	1	s.
Napa (S. H.).	do.	60	34	49.2	- 3.4	67	31	35	8†	30	3.37	- 0.33	0.98	0	6	11	12	8	sw.
Needles.	San Bernardino.	477	20	63.6	- 0.2	80	18	44	10	26	2.31	+ 1.90	1.30	0	4	23	0	8	w.
Nellie.	San Diego.	5,350	3	-	-	-	-	-	-	-	-	-	-	43.0	-	-	-	-	T. O. Bailey.
Nevada City.	Nevada.	2,580	20	43.5	- 1.3	70	31	23	3†	45	6.15	- 2.78	1.64	2.5	17	7	13	11	s.
Newhall **.	Los Angeles.	1,200	35	51.4	- 2.7	70	18†	32	11	...	15.40	+ 12.03	5.84	0	8	12	6	13	se.
Newman.	Stanislaus.	91	23	59.8	+ 4.1	72	28†	47	10	20	2.14	+ 0.02	0.56	0	7	16	5	15	n.
North Bloomfield.	Nevada.	3,214	15	47.0	+ 2.9	71	23	31	23	40	6.50	- 3.11	2.10	4.5	6	10	7	14	sw.
North Fork.	Madera.	3,000	8	44.2	-	69	1	28	9†	36	8.49	-	2.00	7.5	15	7	10	14	U. S. Forest Service.
Oakdale **.	Stanislaus.	156	18	52.6	+ 0.8	73	31	36	16	...	2.58	- 0.23	0.72	0	9	13	6	12	sw.
Oak Grove.	San Diego.	2,751	2	46.4	-	69	19	26	30	35	9.53	-	3.00	1.0	13	6	7	18	B. L. Johnson.
Oakland.	Alameda.	36	36	52.2	- 0.8	60	30	40	17	24	2.68	- 1.42	1.15	0	6	10	8	13	Chabot Observatory.
Oceanside.	San Diego.	60	2	56.6	-	75	5	40	25	24	5.78	-	0.81	0	18	10	9	12	H. D. Brodie.
Ojai Valley.	Ventura.	900	6	51.5	-	76	18	32	11	40	8.43	-	2.29	0	11	12	9	7	sw.
Orland.	Glenn.	254	30	51.6	- 4.1	78	31	31	15	36	4.02	+ 1.37	1.90	0	6	12	9	11	W. H. Duncan.
Orleans.	Humboldt.	520	9	53.5	-	88	31	29	3	51	5.05	-	1.05	0	12	18	4	9	sw.
Oroville (near).	Butte.	250	28	53.2	- 2.1	76	31	33	2	37	6.79	+ 2.59	2.39	0	10	12	2	17	E. D. Fairchild.
Palermo.	do.	213	21	57.0	- 4.2	80	12†	35	2†	41	3.10	- 0.62	2.00	0	5	10	10	11	Western Pacific Co.
Palm Springs **.	Riverside.	584	23	57.6	- 7.0	73	23†	44	12	...	2.53	+ 1.94	1.90	0	6	12	9	19	Western Pacific Co.
Passadena.	Los Angeles.	827	22	51.2	- 3.2	71	18	34	14	31	11.83	+ 8.15	2.71	0	13	18	4	9	sw.
Paso Robles.	San Luis Obispo.	800	29	49.9	- 1.7	64	31	28	3	38	4.75	-	1.55	0	10	9	9	13	E. D. Sorver.
Peachland.	Placeria.	190	16	48.6	- 3.3	72	30	28	3	38	4.75	- 2.76	1.17	0	10	9	11	E. H. Parnell.	
Placeria.	El Dorado.	1,875	23	45.1	- 2.3	64	31	28	2	32	3.68	- 4.18	0.17	0	10	9	11	A. Baring-Gould.	
Point Lobos.	San Francisco.	250	19	51.6	- 0.8	65	18	43	17	30	4.03	+ 0.48	1.80	0	9	11	5	15	John Hyslop.
Point Reyes.	Marin.	490	20	49.8	- 0.6	61	18	42	9	13	2.03	- 1.72	0.99	0	10	5	11	U. S. Weather Bureau.	
Porterville.	Marin.	464	23	56.4	+ 0.2	78	31	45	5†	37	3.12	+ 1.28	0.95	0	12	11	17	Leslie McAllif.	
Quincy.	Plumas.	3,400	17	40.8	0.0	64	23†	18	22	42	4.22</td								

TABLE 1.—Climatological data for March, 1912. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.			Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
<b>California—Continued.</b>																				
Santa Rosa.	Sonoma.	181	23	49.8	-2.3	73	30	29	22	38	4.69	-0.42	1.36	0	9	10	2	19	s.	Southern Pacific Co.
Sequoia **.	Fresno.	311	26	52.8	-1.3	69	31	40	87	22	2.22	+0.70	0.55	0	12	20	0	11	s.	Do.
Seven Oaks.	San Bernardino.	5,000	2																M. Lewis.	
Shasta.	Shasta.	1,048	16	39.2	-13.3	66	80	22	19	30	5.34	-2.90	1.84	0	11	20	6	5	n.w.	Dr. T. J. Edgecomb.
Sierra Madre.	Los Angeles.	1,400	15	52.4	-2.9	71	28	38	13†	29	13.95	+8.58	3.26	0	10	8	0	23	se.	Mrs. A. E. Gregory.
Sierraville.	Sierra.	5,000	2	29.2	-	63	23	-4	9	59	2.73	-	0.63	18.0	6	8	13	10	sw.	C. D. Johnson.
Sisson.	Siskiyou.	3,555	23	37.2	-2.6	68	31	14	3	39	6.38	+0.76	1.55	43.5	12	8	13	10	s.	Southern Pacific Co.
Soledad **.	Monterey.	188	38	66.4	+12.8	86	20	50	1†	22	2.25	+0.59	0.79	0	7	14	0	17	n.	Do.
Sonorá.	Tuolumne.	1,825	24	47.4	-	68	31	30	9	32	4.73	-2.41	0.95	0	12	9	14	8	sw.	Chas. P. Jones.
Southeast Farallon.	San Francisco.	30	9																U. S. Weather Bureau.	
Springville.	Tulare.	4,000	5	40.4	-	64	18	25	14†	34	7.00	-	1.80	40.0	9	12	0	19	.....	D. L. Wishon.
Squirrel Inn.	San Bernardino.	5,280	25	35.1	-	53	24	25	14	21	15.75	-	2.84	27.0	18	5	6	20	se.	A. D. Frantz.
Stanwood.	Butte.	2,140	8	47.2	-	66	31	28	10	34	6.92	-	1.78	3.2	7	18	3	10	n.	Cal. Gas & Elect. Co.
Stirling City.	.....do.....	3,525	8	46.0	-	70	31	28	17	31	10.26	-	5.20	20.0	9	6	10	15	se.	Butte Co. R. R. Co.
Stockton (S. H.).	San Joaquin.	23	41	52.0	-2.5	73	31	34	3†	32	1.57	-0.69	0.61	0	10	13	12	6	se.	State Hospital.
Storey.	Madera.	296	12	49.2	-3.1	70	18†	25	12	41	2.72	+0.86	0.76	0	8	15	0	16	se.	Santa Fe Co.
Suisun **.	Solano.	20	32	52.1	-3.7	62	4†	39	8	2	2.32	-0.96	1.00	0	5	26	0	5	sw.	Southern Pacific Co.
Sulphur Banks.	Lake.	1,350																	J. T. La Bree.	
Summerdale.	Marietta.	5,270	16																Mrs. J. E. Lowry.	
Summit.	Placer.	7,017	39	28.6	-2.8	48	24	6	7	31	6.10	-2.92	2.20	61.0	9	14	0	17	sw.	Southern Pacific Co.
Susanville.	Lassen.	4,175	23	38.4	-1.1	62	28	11	3	36	1.43	-1.78	0.46	5.0	7	11	16	4	sw.	James Branham.
Tamarack.	Alpine.	8,000	6	19.4	-	48	23	-17	14	54	5.89	-	0.80	61.0	15	5	8	18	sw.	Cal. Gas & Elect. Co.
Tehachapi **.	Kern.	3,964	35																Southern Pacific Co.	
Tehama **.	Tehama.	230	41	53.2	-1.7	76	31	37	9	.....	4.75	+1.89	1.92	0	4	18	2	11	s.	Do.
Tejon Rancho.	Kern.	1,500	10	46.2	-	69	1	29	10	26	6.03	-	1.20	T.	11	13	0	18	s.	S. E. Bailey.
Three Rivers.	Tulare.	870	2	51.4	-	72	4†	33	11†	36	4.38	-	0.98	0	15	5	13	13	sw.	E. D. Barton.
Towle.	Placer.	3,704	26	40.0	-4.5	63	31	24	7	31	9.20	-0.06	1.71	24.0	11	3	8	20	s.	Southern Pacific Co.
Tracy **.	San Joaquin.	64	32	54.0	-0.8	70	29†	40	9	.....	0.80	-0.97	0.25	0	4	11	15	5	n.w.	Do.
Ukiah.	Mendocino.	620	19	49.8	+0.1	81	31	27	3	49	5.44	-0.11	1.32	0	10	14	3	9	n.w.	Dr. Geo. McCowen.
Upper Lake.	Lake.	1,350	27	47.5	-1.7	79	31	22	3†	47	4.60	+0.74	1.12	0	9	9	8	14	n.w.	C. M. Hammond.
Vacaville.	Solano.	175	24	51.8	-2.1	78	30	33	8	39	3.66	-0.54	1.49	0	8	10	17	4	sw.	G. O. Coburn.
Valley Springs **.	Calaveras.	673	23	54.8	0.0	80	31	41	9†	.....	4.09	-0.60	1.41	0	10	7	11	13	s.	Southern Pacific Co.
Visalia.	Tulare.	334	24	48.6	-3.9	85	7	28	16	45	2.21	+0.29	0.70	0	8	24	0	7	ne.	Santa Fe Co.
Warner Springs.	San Diego.	3,165	4	45.8	-	69	18	29	30	36	7.29	-	1.45	T.	17	5	19	7	.....	Mrs. F. S. Sandford.
Wasco.	Kern.	336	12	52.3	-2.1	75	5	30	15	34	2.36	+1.36	0.80	0	7	19	0	12	.....	Santa Fe Co.
Watsonville.	Santa Cruz.	23	16	48.3	-6.4	77	21	25	22	49	3.75	-1.04	1.25	0	8	8	18	5	w.	Spreckels Sugar Co.
Weaverville.	Trinity.																		U. S. Forest Service.	
Wetitchpec.	Humboldt.	1,700	2	43.2	-	71	31	25	3	36	7.44	-	2.23	T.	15	20	2	9	n.w.	M. E. Lathrop.
Westley **.	Stanislaus.	90	23	58.9	+2.7	71	28†	47	15	.....	2.61	+0.71	0.90	0	8	12	0	19	n.	Southern Pacific Co.
Wheatland.	Yuba.	84	25	51.0	-1.6	71	31	32	3	32	3.06	-0.44	1.41	0	7	10	10	11	s.	William Lumbard.
Willows.	Glenn.	136	33	51.3	-3.3	79	31	30	16	35	4.54	+2.34	1.24	0	8	13	11	7	n.	E. C. Mills.
Yosemite.	Mariposa.	3,945	8	39.9	-	72	31	16	14	51	6.29	-	1.60	12.0	15	10	8	13	s.	J. P. Kelley.

\*, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for March, 1912. District No. 11, California.*

TABLE 2.—*Daily precipitation for March, 1912. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.	
California—Contd.																																		
Fort Ross.	Coast.	T.		.05	1.12	.50	.38	.02			63	2.44	.32		.91	.10																		6.47
Fouts Springs.	Sacramento.		.35	.73	.68	.06	.05	.25		30	1.48	.36		1.36	.04	.05																	5.71	
Fredbal.	Coast.	.90	.19	.90	1.39	4.10	.43		36	1.05	2.84	64	1.79	1.49																		19.26		
Fresno.	San Joaquin.		.33	.35	.59	T.	.17	T.	.04	.12		.77	.02		.17																	3.02		
Friant.	do.																																3.04	
Galt.	San Joaquin.																																2.62	
Georgetown.	do.																																6.00	
Gilroy.	Coast.																																4.00	
Gulta.	do.																																6.15	
Glendora.	do.																																	
Glen Ranch.	do.																																	17.76
Glenville.	San Joaquin.	T.		T.	.27	.08	.11	.14		20	.30		.50	.66																			3.91	
Glenwood.	Coast.																																6.06	
Gold Run.	Sacramento.	.35	.20		10	1.00	.63	.65	T.			.10	.60	1.15		.50																	6.52	
Gonzales.	Coast.		.57	.04	.34	.07	.02		.01																								2.43	
Grass Valley.	Sacramento.	.08	.04		.36	1.33	1.63	T.	T.																								5.82	
Greenland Ranch.	Desert.																																	
Greenville.	Sacramento.	T.	.21	T.	T.	2.15	1.26	.38	.08	T.	T.	.16	.19	.05	T.	.60	.18																5.20	
Gridley.	do.		.05	.41	.37	.37																											3.55	
Groveland.	San Joaquin.	T.	.32	.89	.40	.62	.58	.19																									3.86	
Guinda.	Sacramento.																																	
Hanford.	San Joaquin.																																	3.24
Head Dam.	Sacramento.	.07	.01		22	1.90	2.00	.01	.05																							7.40		
Healdsburg.	Coast.																																	4.88
Hearst.	do.																																	6.00
Heber.	Desert.																																	0.66
Helen Mine.	Coast.																																	10.57
Hetch Hetchy.	San Joaquin.	.02	.49	.96	.71	1.07	1.14	.21																									6.73	
Holcomb.	Coast.	.22		.09	.42	.09	1.03	T.																									6.21	
Hollister.	do.																																	2.25
Hornbrook.	Klamath.																																	1.25
Hot Springs.	San Joaquin.	.07		.25																														5.84
Hullville.	Coast.																																	6.61
Idyllwild.	do.																																	
Independence.	Owens.			.08	.08																													1.10
Indio.	Desert.	T.		T.	.18	T.	.15																										1.66	
Inskip.	Sacramento.	.61	T.																															11.10
Ione.	San Joaquin.																																	2.47
Jacksonville.	do.																																	4.11
Jamestown.	do.																																	5.06
Jenny Lind.	do.																																	3.30
Jolon.	Coast.																																	5.28
Julian.	do.																																	15.00
Kennedy Mine.	San Joaquin.																																	13.65
Kennett.	Sacramento.	.02																																10.32
Kentfield.	Coast.	.05																																7.31
Kernville.	San Joaquin.																																	
King City.	Coast.																																	3.03
Knights Landing.	Sacramento.																																	3.08
La Grange.	San Joaquin.																																	3.13
La Jolla.	Coast.	.02																																
Lake Eleanor.	San Joaquin.	.66																																12.05
Lakeside.	Coast.																																	7.68
La Porte.	Sacramento.	.43	.80																														7.85	
Lathrop.	do.																																	10.18
Laurel.	Coast.																																	1.14
Laytonville.	do.																																	6.55
Le Grand.	San Joaquin.																																	2.64
Lemon Cove.	do.																																	5.12
Lick Observatory.	Coast.																																	3.96
Livermore.	do.																																	2.40
Lodi.	San Joaquin.																																	1.43
Lone Pine.	do.																																	3.45
Long Valley.	Mt'n Lakes.																																	7.72
Lordsburg.	Coast.	.39																																6.77
Los Alamos.	do.																																	6.99
Los Angeles.	do.																																	1.39
Los Banos.	San Joaquin.																																	5.62
Los Gatos.	Coast.																																	3.65
Lowे Observatory.	Sacramento.	.27	T.																														6.07	
McDoel.	Klamath.																																	

TABLE 2.—*Daily precipitation for March, 1912. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																														Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>California—Contd.</i>																																			
Napa City	Coast																																		4.04
Napa (S. H.)	do	T.	T.	.44	.85	.33																											3.37		
Needles	Desert			.38																														2.31	
Nalite	Coast			9.35																														21.35	
Nevada City	Sacramento	.08	.08	.03	.21	1.60	1.64	.06	.03	.01	T.	.10	.92	.33	.01	.75	.18															6.15			
Newhall	Coast	T.		1.55	3.72	1.90																										15.40			
Newman	San Joaquin																																2.14		
North Bloomfield	Sacramento																																6.50		
North Fork	San Joaquin	T.		.03	1.14	20.1	1.62	.80	.55																						8.49				
North Lakeport	Coast																																5.12		
Oakdale	San Joaquin	T.																															2.58		
Oak Grove	Coast	.75		.15	.55	.64	.84	.10		1.70	2.07																				9.53				
Oakland	do	T.	T.	.91	1.13	T.																										2.68			
Oakhurst	do																																6.33		
Oceanside	do	.79		.33	.03	29.9	.08	T.	.08	.65	.81																				5.78				
Ojai Valley	do	.08		.05	1.36	2.29	.57	T.																								8.43			
Orland	Coast	T.																															4.02		
Orleans	do	.03																															5.05		
Oroville	do																																6.79		
Ozena	Coast	.53		.17	.85																												5.93		
Palermo	Sacramento	.10																															3.10		
Palm Springs	Desert																																2.53		
Parkfield	Coast																																5.34		
Pasadena	do	.13		.02	2.71	6.41	1.24	.04																							11.83				
Paso Robles	do																																5.14		
Peace Ranch	do	T.																															4.75		
Phoenix Dam	San Joaquin	.27		.56	.29	.57	.35	.19																								4.30			
Pilot Creek	Sacramento	.28		.51	T.	1.00	3.10	.13	.12																						8.69				
Pinchot	Coast			.27																															
Pine Crest	do																																	11.68	
Placerville	Sacramento	.25		.12																													3.69		
Point Lobos	Coast	T.																															4.03		
Point Loma	do	.16		.74																													4.67		
Point Reyes	do	T.		.01																													2.03		
Porterville	San Joaquin			.35		.02																										3.12			
Portulaca	do																																		
Prattville	Sacramento	.06		.11																													4.99		
Priest Valley	Coast																																	5.62	
Quincy	Sacramento			.21																													4.22		
Red Bluff	do																																4.80		
Redding	do	.35		.01																													6.78		
Redlands	Coast	.26		.01																													5.87		
Reedley	San Joaquin			.53																													2.47		
Repressa	Sacramento																																3.36		
Rialto (near)	Coast	.51																															14.84		
Rio Vista	Sacramento																																2.04		
Riverside	Coast	.15																															3.64		
Rocklin	Sacramento	.05																															2.03		
Rohnerville	Coast	.08																															4.77		
Sacramento	Sacramento																																1.97		
Saint Helena	Coast																																5.83		
Salfinas	do																																3.25		
San Bernardino	do	.20		.01																													5.18		
San Diego	do	1.29		.01																													5.72		
San Francisco	do	T.																														4.10			
San Jacinto	do	1.26		.03																													4.79		
San Jose	do			.09																													2.80		
San Luis Obispo	do	.03		.50																													5.65		
San Mateo	do			.05																													3.14		
San Miguel	do	T.																															4.89		
San Miguel Island	Ocean	.35		.04																													6.32		
Sanger	San Joaquin			.62																													3.46		
Santa Ana River	Coast																																		
Santa Barbara	do	.48																															9.48		
Santa Clara	do			.02			</																												

TABLE 2.—*Daily precipitation for March, 1912. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																													Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<i>California—Contd.</i>																																
Towle	Sacramento	.58	.20	.53	1.31	1.71	.43	.87	...	...	.22	.07	.70	1.30	.20	.90	...	...	...	...	...	...	...	...	...	...	...	...	18	9.20		
Tracy	San Joaquin	...	.25	...	T.	...	...	...	...	...	...	.20	.25	...	.10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.80	
Tulare	do	T.	T.	.44	T.	.15	...	...	...	...	.88	...	.64	...	.02	.16	.04	...	...	...	...	...	...	...	...	...	...	...	...	...	2.79	
Tustin (near)	Coast	.15	.06	.36	.10	.27	.22	.10	.04	1.65	...	...	...	.67	.16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.43	
Ukiah	do	...	...	.10	.85	.89	.30	...	...	...	...	1.0	1.32	.55	.03	1.20	.10	...	...	...	...	...	...	...	...	...	...	...	...	...	5.44	
Upper Lake	Sacramento	...	...	10	1.04	.67	.23	.01	...	...	...	T.	1.12	.33	T.	1.08	.02	T.	...	...	...	...	...	...	...	...	...	...	...	4.80		
Upper Mattole	Coast	...	...	1.20	1.63	1.25	.04	...	...	...	T.	.01	.64	...	T.	2.18	.61	1.66	.05	...	...	...	...	...	...	...	...	...	...	...	9.49	
Vacaville	Sacramento	...	...	.45	1.49	.20	...	...	...	...	.04	.73	.13	.02	...	.60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.66	
Valley Springs	San Joaquin	.02	...	.05	.04	1.41	.31	.05	...	...	...	.40	.80	.34	...	.67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.09	
Visalia	do	...	...	.40	...	.05	...	...	...	...	.70	...	.55	...	.11	...	...	...	.20	...	...	...	...	...	...	...	...	...	...	...	2.21	
Warner Springs	Coast	.41	.50	.05	1.10	.40	...	...	1.45	.41	...	1.17	...	.11	...	T.	...	...	.06	15	.17	...	...	...	...	...	...	...	...	...	7.29	
Wasco	San Joaquin	...	...	...	.50	T.	...	...	.30	.80	...	.40	.05	...	T.	...	...	T.	...	...	T.	...	...	T.	...	...	...	...	...	...	2.36	
Watsonville	Coast	...	...	.16	.08	.76	...	...	...	...	1.25	1.00	...	.37	...	...	...	...	...	.05	...	...	...	...	...	...	...	...	...	3.75		
Weaverville	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Weitchpec	Klamath	.05	...	1.21	1.40	.89	.67	.03	...	...	...	.10	.23	.08	2.23	.68	.61	.01	...	...	...	...	...	...	...	...	...	...	...	7.44		
West Branch	Sacramento	.69	.08	...	4.22	2.43	2.42	.42	.15	...	...	.67	.73	...	1.19	.55	...	...	...	37	...	...	...	...	...	...	...	...	...	10.22		
Westley	San Joaquin	...	...	.08	.10	.60	...	.22	...	...	...	.90	.50	.05	...	.16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.61	
West Point	do	...	...	.32	.16	.42	.84	2.05	.95	.37	.09	...	.25	.13	.78	.18	.79	...	...	.07	.11	...	...	...	...	...	...	...	...	7.54		
West Saticoy	Coast	.35	1.15	.42	1.27	...	.85	...	2.04	...	...	...	...	...	...	...	...	...	...	.05	...	...	...	...	...	...	...	...	...	...	6.63	
Wheatland	Sacramento	T.	...	...	.22	1.41	.39	.01	...	...	T.	...	.55	.12	...	.36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.06	
Willows	do	...	...	...	10	1.20	1.24	.60	...	...	T.	T.	1.17	.01	...	.20	...	...	...	.02	...	...	...	...	...	...	...	...	...	4.54		
Yosemite	San Joaquin	...	...	.10	1.01	.70	1.60	.55	.29	...	.25	.05	.46	.10	...	.10	.60	...	...	.27	...	...	...	...	...	...	...	...	...	6.29		

\* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for March, 1912. District No. 11, California.

Date.	Lakeview, Oreg.	California.																									
		Alturas.		Barstow.		Branstrom.		Brawly.		Colusa.		Eureka.		Fresno.		Independ- ence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porter- ville.		Red Bluff.	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.		51	34	71	35	54	38	60	47	60	50	51	43	65	48	58	36	60	50	45	37	48	39	67	48	58	48
2.		42	19	69	33	55	28	65	45	58	33	48	35	63	40	58	28	61	50	46	35	47	32	68	43	56	40
3.		41	- 4	62	36	56	24	62	45	58	31	51	32	62	41	54	28	57	48	45	37	57	23	69	42	61	34
4.		45	12	71	40	48	34	59	42	55	45	47	37	66	48	58	37	62	51	45	38	49	35	74	43	48	44
5.		51	33	65	43	50	38	65	46	58	46	47	43	63	53	58	34	64	54	47	42	49	39	74	40	54	44
6.		45	30	62	41	44	34	70	51	57	44	51	42	61	51	61	39	60	50	42	36	49	37	73	50	56	45
7.		42	21	70	45	49	32	61	50	55	41	51	41	61	47	56	26	59	47	47	37	51	30	74	41	52	42
8.		41	16	65	38	48	27	65	50	56	34	50	37	58	45	51	25	59	47	48	36	52	27	71	40	56	38
9.		42	17	53	42	52	24	60	46	55	34	50	36	49	37	46	31	52	48	35	59	23	68	45	61	36	
10.		43	27	65	44	53	30	61	52	63	41	54	40	58	44	52	30	59	46	45	37	55	28	65	48	60	42
11.		45	19	68	40	48	38	62	45	59	40	60	42	61	40	50	22	60	44	41	38	51	30	60	41	55	44
12.		37	27	65	38	43	33	71	42	49	49	40	52	42	53	44	40	52	55	41	34	61	40	46	42	52	
13.		41	26	63	38	45	32	67	49	57	41	53	40	58	42	52	34	58	43	44	35	45	30	60	41	54	42
14.		41	21	72	40	45	32	73	46	66	41	55	43	62	44	56	30	64	43	48	38	51	26	62	40	57	45
15.		41	27	71	41	42	35	75	40	55	44	52	43	59	40	56	29	62	48	43	36	58	34	65	41	50	38
16.		39	19	75	46	45	31	73	54	56	36	49	42	62	43	56	34	62	49	42	36	48	31	67	40	53	34
17.		45	28	74	42	58	36	75	48	61	38	55	42	65	43	55	29	65	48	52	36	62	28	66	42	60	42
18.		54	21	70	38	61	35	76	43	67	41	51	38	70	45	63	29	68	51	58	42	69	29	70	40	66	40
19.		49	21	78	46	58	29	80	55	65	45	48	40	70	43	62	32	63	47	52	37	64	29	74	41	66	42
20.		42	22	68	42	60	28	72	35	63	42	54	34	55	45	59	32	57	47	48	36	57	32	73	42	62	48
Mns.		48.9	22.0	68.5	40.6	54.9	31.7	69.7	46.5	61.5 <sup>a</sup>	41.2 <sup>a</sup>	52.2	40.4	62.4	44.0	55.5	30.9	60.9	47.6	48.7	38.1	56.2	30.8	70.4	42.4	60.1	42.6

  

Date.	California.																										
	Redlands.		Sacramento.		San Diego.		San Fran- cisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1.	56	45	57	45	61	53	54	49	60	48	58	49	60	50	63	40	55	28	61	45	32	28	41	36	58	31	
2.	59	41	56	41	62	52	54	47	58	42	56	58	48	67	41	49	18	58	44	28	20	40	32	48	30		
3.	60	38	54	36	56	46	57	45	59	37	56	42	58	43	64	30	41	14	58	34	32	14	43	11	56	20	
4.	64	38	61	46	62	54	57	49	64	44	61	51	60	53	65	38	51	19	67	43	32	30	49	27	54		
5.	68	49	57	48	71	55	58	51	61	52	60	54	56	55	56	40	38	32	62	32	27	46	33	48	33		
6.	61	53	55	43	64	54	54	48	57	41	58	50	61	53	56	46	40	38	31	60	48	32	24	44	33	44	32
7.	55	40	55	40	60	51	56	45	59	38	59	45	58	43	58	32	35	29	58	37	25	6	43	22	43	28	
8.	58	45	56	40	61	49	56	45	59	36	55	43	59	50	56	30	35	26	58	40	28	10	44	27	46	27	
9.	54	45	59	39	64	48	59	43	58	34	52	46	51	50	63	30	40	18	58	34	33	14	46	15	47	19	
10.	54	49	61	41	64	49	55	48	60	40	55	43	60	46	63	45	40	25	62	43	32	22	47	29	44	28	
11.	58	37	57	42	58	47	56	47	59	40	56	35	58	39	60	45	39	31	60	37	32	18	45	25	47	21	
12.	52	39	50	43	59	46	52	45	57	42	57	43	58	45	54	44	35	31	52	47	31	24	40	30	49	29	
13.	50	39	55	41	57	46	54	44	58	39	54	38	60	41	53	43	41	29	58	42	32	28	43	31	44	22	
14.	63	33	59	40	63	49	58	44	61	45	62	41	64	42	60	34	40	31	60	41	31	12	42	30	56	16	
15.	64	36	52	43	62	46	53	48	53	40	57	42	60	42	56	39	36	25	56	46	28	24	39	28	48	23	
16.	61	43	54	37	63	51	54	45	59	35	59	40	62	48	56	32	35	27	58	37	30	20	42	20	52	20	
17.	65	40	62	41	63	46	62	46	64	38	60	38	62	42	57	40	44	22	67	36	34	28	47	26	57	18	
18.	75	43	67	46	69	50	67	50	70	43	67	39	65	43	70	40	53	25	66	44	42	24	55	24	65	19	
19.	63	43	64	45	65	54	57	49	64	40	59	45	61	42	65	35	44	21	65	45	44	24	56	26	70	19	
20.	57	46	62	42	58	49	60	46	58	43	53	46	59	46	66	36	46	22	60	46	38	25	56	26	61	24	
21.	58	41	64	46	56	47	62	52	65	41	60	41	56	41	67	40	50	22	66	44	32	12	57	21	58	24	
22.	64	41	69	45	58	45	62	47	70	34	62	36	64	43	67	40	53	27	69	37	42	16	53	20	64	22	
23.	68	41	66	42	63	47	56	46	63	41	60	40	70	43	61	39	62	31	60	39	47	16	61	25	68	24	
24.	73	38	58	44	6																						